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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/385,102	08/27/1999	TOSHIHIRO SHIMA	04783/008001	8708

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EXAMINER

PARK, CHAN S

ART UNIT	PAPER NUMBER
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2622

DATE MAILED: 09/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/385,102

Applicant(s)

SHIMA, TOSHIHIRO

Examiner

CHAN S PARK

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 6 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 8/27/99.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 8/27/99 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/358,102.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 7 & 10.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 3 and 13 are rejected under 35 U.S.C. 112, second paragraph, as failing to set forth the subject matter which applicant regards as his invention. Evidence that claims 3 and 13 fail to correspond in scope with that which applicants regards as the invention can be found in Paper No. 1 filed on August 27, 1999. In that paper, applicant has stated "...if it (received data monitor) determines that the amount of packet data stored in the network memory is large (over a specific value)... the priority alteration unit sets the priority of the language task higher than the priority of the communication task," and this statement indicates that the invention is different from what is defined in the claim(s) because it states "... in said first memory (network memory) is below a specific value".
2. Claims 4 and 14 are rejected under 35 U.S.C. 112, second paragraph, as failing to set forth the subject matter which applicant regards as his invention. Evidence that claims 4 and 14 fail to correspond in scope with that which applicants regards as the invention can be found in Paper No. 1 filed on August 27, 1999. In that paper, applicant has stated "...if it (received data monitor) determines that the amount of packet data stored in the network memory is small (below a specific value)... the priority alteration unit sets the priority of the communication task higher than the priority of the language

task," and this statement indicates that the invention is different from what is defined in the claim(s) because it states "... in said first memory (network memory) is over a specific value".

3. Claims 6, 7, 16, 17, 22, and 24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The wording "specific value" describing the condition of "second memory" is unclear as to its meaning, and is not defined in the specification.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Furukawa U.S. Patent No. 6,029,238 in view of Mishima et al. U.S. Patent No. 6,449,056.

4. With respect to claim 1, the Furukawa reference discloses a printer controller (printer PT1 in fig.3) comprising:

Communication control means (communication controller 41 in conjunction with file memory 47) for receiving data from host computers (host computer WS in fig. 1) and extracting print job data on the basis of the received data (col. 6, lines 1-5);

Language control means (main controller 41 in conjunction with file memory 47) for generating image data on the basis of said print job data (col. 6, lines 9-15); and

Print control means for controlling a print engine (print process controller 45).

Although the Furukawa reference does not explicitly disclose the data being a self-address packet data, in a network environment, it is inherent that each print data sent by the host computer has an address of the printer for the proper transmission of the print data. It is also well known in the art at the time the invention was made to extract the only the print job part of the packet data for the further image processing by the printer. Also refer to col. 6, lines 33-34.

The Furukawa reference does not disclose an execution means for exclusively executing either of three said control means according to priorities assigned to each of these means nor alteration means for altering, on the basis of specific events, the relative priority sequence based on the priority between said communication control means and said language control means.

On the other hand, the Mishima et al. reference discloses a digital copier connected to a host computer over network for receiving print data (fig. 25). According to the reference, it teaches the method of sending information on the availability of memory space in the digital copier. When the memory of the digital copier gets full, it stops the transmission of next print data from the host computer. Meanwhile, the digital copier informs the host computer when the copier memory will be available for next print data to be received and starts emptying the memory space by printing out the print data

(fig. 28 – fig. 31), which clearly discloses the method of altering the communication control means and the image generating control means.

Furukawa and Mishima et al. are analogous art because they are from the same field of endeavor that is the network printing art.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the print controller of Furukawa with the Mishima et al. method of freeing the memory by printing out printing data while stopping the transmission of next print data from the host computer.

The suggestion/motivation for doing so would have been to prevent the possible loss of print data by overflowing the memory. Thus, the combination method would have allowed users to form image more efficiently.

5. With respect to claim 2, the Furukawa reference discloses a first memory (file memory 47) for storing the packet data received by said communication control means (col. 6, lines 2-3). The reference also discloses the method of self-checking the capability of printing performance (col. 12, lines 1-5).

The reference, however, does not disclose first monitoring means for generating said specific events on the basis of the amount of packet data stored in said first memory.

The Mishima et al. reference discloses memory capacity monitoring means for generating said specific events (full-memory state) on the basis of the amount of data stored in said memory (col. 17, lines 30-33).

Furukawa and Mishima et al. are analogous art because they are from the same field of endeavor that is the network printing art.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the Furukawa first memory and the Mishima et al. method of monitoring the capacity of memory to generate specific events.

The suggestion/motivation for doing so would have been to prevent the possible loss of print data by overflowing the memory. Thus, the combination method would have allowed users to form image more efficiently.

6. With respect to claims 3, 4, and 21 as noted above in claim 1, the Furukawa reference discloses the language control means and communication control means but it does not disclose the alteration means for raising the priority between two control means on the basis of the amount of data stored in said first memory.

On the other hand, the Mishima et al. reference discloses a digital copier connected to a host computer over network for receiving print data (fig. 25). According to the reference, it teaches the method of sending information on the availability of memory space in the digital copier. When the memory of the digital copier gets full, it stops the transmission of next print data from the host computer. Meanwhile, the digital copier informs the host computer when the copier memory will be available for next print data to be received and starts emptying the memory space by printing out the print data (fig. 28 – fig. 31), which clearly discloses the method of altering the communication control means and the image generating control means. For example, when monitoring means indicates the memory full state, the transmission of print data from the host

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computer to the printer/copier stops and frees the memory by running the image generating means first. When the memory has a space to receive more data, the communication control means takes more data and stores it in the memory to be further processed by language control means.

Furukawa and Mishima et al. are analogous art because they are from the same field of endeavor that is the network printing art.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the Furukawa first memory and the Mishima et al. method of monitoring the capacity of memory to raise the priority between two control means on the basis of said specific events.

The suggestion/motivation for doing so would have been to prevent the possible loss of print data by overflowing the memory. Thus, the combination method would have allowed users to form image more efficiently.

Note that the office has interpreted the claim 3 "...said first memory is below a specific value" as "...said first memory is over a specific value."

Note that the office has interpreted the claim 4 "...said first memory is over a specific value" as "...said first memory is below a specific value."

Note that the office has interpreted the claim 21 "...said first memory is over a specific value" as "...said first memory is below a specific value."

7. With respect to claim 5, the combination of the Furukawa reference and the Mishima et al. reference discloses a printer controller having all the limitations of claim

1. However, it does not explicitly disclose the controller having a second memory for storing the print job data extracted by said communication control means and second monitoring means for monitoring the available memory capacity.

As noted above in arguments for claim 2, the Mitshima et al. reference discloses the method of monitoring the memory capacity.

Although Furukawa does not explicitly disclose the second memory for storing extracted print job data from the packet data, it is well known in the art at the time the invention was made to have a memory device for print job data. It is very well known that when data is transfer from one task to the next task, it must be stored in a memory device like RAM first.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the second memory and the Mishima et al. method of monitoring the capacity of memory to generate specific events.

The suggestion/motivation for doing so would have been to prevent the possible loss of print data by overflowing the memory. Thus, the combination method would have allowed users to form image more efficiently.

8. With respect to claims 6, 7, and 22, arguments analogous to those presented for claims 3, 4, and 21, are applicable.

Note that the office has interpreted the claim 6 "...said second memory is below a specific value" as "...said second memory has much free space."

Note that the office has interpreted the claim 7 "...said second memory is over a specific value" as "...said second memory has little free space."

Note that the office has interpreted the claim 22 "...said second memory is below a specific value" as "...said second memory has much free space."

9. With respect to claim 8, arguments analogous to those presented for claim 1, are applicable.

10. With respect to claim 9, all the limitations of claim 9 are noted in arguments for claims 1 and 8 except a program product in which is recorded a program to be executed by the processor of a printer.

The Mishima et al. reference further discloses a processor of a printer to execute a program for controlling the different modules (col. 9, lines 8-10 & col. 9, lines 27-35).

11. With respect to claim 10, the Furukawa reference discloses a printer (PT1) comprising:

A controller (main controller 41);

A print engine for printing on a print recording medium (col. 6, lines 14-16);

A communication interface (network interface 52) connected to a network such that communication with host computers is possible (col. 6, lines 33-34);

With respect to remaining elements of the claim, arguments analogous to those presented for claim 1, are applicable.

12. With respect to claims 11 and 18, as noted above in claim 1, the combination of the Furukawa reference and the Mishima et al. reference discloses all the limitations of the claim except alteration means for altering, on the basis of specific events, the

relative time proportions or the relative time ratio between the execution time in which said execution means is to execute said communication control means and the execution time in which said execution means is to execute said language control means.

The Mishima et al. reference, however, further discloses the method of notifying the user how much time it will take for the memory to free its memory space for next print data (fig. 29 – fig. 31).

Furukawa and Mishima et al. are analogous art because they are from the same field of endeavor that is the network printing art.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the print controller of Furukawa with the Mishima et al. method of updating the current memory capacity and the time it takes for the memory to free its space for the print data.

The suggestion/motivation for doing so would have been to prevent the possible loss of print data by overflowing the memory. Thus, the combination method would have allowed users to form image more efficiently.

13. With respect to claim 12, arguments analogous to those presented for claim 2, are applicable.

14. With respect to claims 13, 14, and 23, arguments analogous to those presented for claims 3, 4, and 21 are applicable.

15. With respect to claim 15, arguments analogous to those presented for claim 5, are applicable.

16. With respect to claims 16, 17 and 24, arguments analogous to those presented for claims 6, 7, and 22 are applicable.

17. With respect to claim 19, arguments analogous to those presented for claims 1 and 18, are applicable.

18. With respect to claim 20, arguments analogous to those presented for claims 10 and 18, are applicable.

Conclusion

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent 5,812,283 to Tachibana et al. discloses a method for recognizing the capacity of memory and releasing a data in the memory to a recording medium to free up the space for the next data to be stored.

U.S. Patent 6,570,666 to Sotokawa discloses a method of instructing the host computer to stop transmitting print data when the printer memory is full.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHAN S PARK whose telephone number is (703) 305-2448. The examiner can normally be reached on M-F 8am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Coles can be reached on (703) 305-4712. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4750.

Csp
September 17, 2003


EDWARD COLES
SUPERVISORY PATENT EXAMINER
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